



OCCUPATIONAL INJURIES AND ILLNESSES IN MISSOURI IN 2000

MANUFACTURING INDUSTRY DIVISION

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Manufacturing was the major industry division with the highest nonfatal occupational injury and illness incidence rate in Missouri private industry in 2000. But the incidence rate was 11.0 (per 100 full-time workers) in 2000 reduced from 12.0 in 1999. The incidence rates of nonfatal occupational injuries and illnesses by industry divisions in Missouri private industry in 2000 are shown in Table 1.

- Manufacturing had the highest incidence rates for total injury and illness cases, total lost workday injury and illness cases, injury and illness cases without lost workdays, and injury cases without lost workdays.
- Manufacturing was the industry division with the highest percentage (24.6%) of nonfatal occupational injuries and illnesses involving days away from work in Missouri private industry in 2000.

Table 2 shows the incidence rates of nonfatal occupational injuries and illnesses by industry for Missouri private industry in 2000. Industries within the manufacturing industry division are listed by 2, 3, and 4-digit Standard Industrial Classification (SIC) codes. The industries are separated into durable goods manufacturing and nondurable goods manufacturing.

- Motor vehicles and car bodies (SIC 3711) was the industry with the highest nonfatal occupational injury and illness incidence rate at 40.9 (per 100 full-time workers).
- Motor vehicles and equipment (SIC 371) had the second highest nonfatal occupational injury and illness incidence rate at 25.9.
- Poultry slaughtering and processing (SIC 2015) was the industry with the third highest nonfatal occupational injury and illness incidence rate at 24.6.

The numbers of nonfatal occupational injuries and illnesses involving days away from work in the manufacturing industry division by selected characteristics are shown in Table 3 for 1996 to 2000 for Missouri private industry.

- The total number of nonfatal occupational injuries and illnesses involving days away from work in manufacturing are listed for each year from 1996 to 2000. The total numbers have decreased 23% from 1996 to 2000. There were 8,356 nonfatal occupational injuries and illnesses involving days away from work in 2000 down from 10,855 in 1996.
- The numbers of nonfatal occupational injuries and illnesses involving days away from work for men and women workers are listed from 1996 to 2000. There was a 23% decrease in the number of injuries and illnesses involving days away from work in men workers from 1996 to 2000 and a 22.2% decrease in the number of injuries and illnesses in female workers in the same time period.
- The main occupations that experience nonfatal occupational injuries and illnesses in the manufacturing industry division are precision production, craft, and repair and operators, fabricators, and laborers. Between 1996 and 2000 there was a 23.1% increase in the number of injuries and illnesses in the precision production, craft, and repair occupation and a 32.5% decrease in the number of injuries and illnesses in the operators, fabricators, and laborers occupation.

Table 4 shows the incidence rates of nonfatal occupational injuries and illnesses involving days away from work for each of the “Top Five” characteristics in the manufacturing industry division in Missouri private industry from 1996 to 2000. Most of the incidence rates have decreased for the worker and case characteristics from 1996 to 2000.

- The “top five” nature of injury, illness characteristics in Missouri private industry in 2000 were sprains, strains; all other; bruises, contusions; soreness, pain; and cuts, lacerations, punctures. Sprains, strains was the nature of injury or illness in 35.4% of all injury or illness cases in the manufacturing industry division in 2000. The incidence rate for sprains, strains has decreased 23.7% from 1996 to 2000. The manufacturing industry division accounted for 20.6% of the injury and illness cases in Missouri private industry in 2000 that sprains, strains, tears was listed as the nature.
- The “top five” part of body affected characteristics in Missouri private industry in 2000 were trunk, upper extremities, back, lower extremities, and finger. Trunk was the part of body affected in 34.6% of the injury and illness cases in the manufacturing industry division in 2000. The incidence rate for trunk has decreased 21.7% from 1996 to 2000. The manufacturing industry division accounted for 24.3% of the injury and illnesses cases in Missouri private industry in 2000 that reported trunk as the part of body affected.
- The “top five” source of injury, illness characteristics in Missouri private industry in 2000 were worker motion or position, parts and materials, all other, machinery, and containers. Bodily motion or position of injured, ill worker was the source of injury, illness in 23.3% of the injury and illness cases in the manufacturing industry division in 2000. The incidence rate for worker motion or position has decreased 5.2% from 1996 to 2000. The manufacturing industry division accounted for 31.6% of the injury and illnesses cases in Missouri private industry in 2000 that reported worker motion or position as the source.
- The “top five” event or exposure characteristics in Missouri private industry in 2000 were contact with object, equipment; overexertion; overexertion in lifting; repetitive motion; and struck by object. Contact with objects and equipment was the event or exposure in 29.4% of the injury and illness cases in the manufacturing industry division in 2000. The incidence rate for contact with object, equipment has decreased 29.2% from 1996 to 2000. The manufacturing industry division accounted for 29.4% of the injury and illness cases in Missouri private industry in 2000 that reported contact with objects and equipment as the event or exposure.

Manufacturing was the major industry division with the highest incidence rate (203.1) of total cases of nonfatal occupational illnesses in 2000 in Missouri private industry. The rate was reduced from 215.1 in 1999.

- 8,000 of the 11,100 nonfatal occupational illness cases in Missouri private industry in 2000 were in the manufacturing industry.
- Manufacturing was the industry division with the highest incidence rates in 2000 for skin diseases or disorders, dust diseases of the lungs, poisoning, disorders due to physical agents, and disorders associated with repeated trauma.
- The nonfatal occupational illness incidence rates by industry and category of illness in Missouri private industry in 2000 are shown in Table 5. The incidence rates represent the number of illnesses per 10,000 full-time workers. The incidence rates are listed for manufacturing industries by 2-digit SIC codes.
- Transportation equipment (SIC 37) had the highest incidence rate for total illness cases at 601.7.
- Leather and leather products (SIC 31) had the second highest incidence rate for total illness cases at 584.8.

Table 1. Incidence rates¹ of nonfatal occupational injuries and illnesses by industry divisions and case types, 2000

Missouri

Industry	2000 Annual average employment ² (000's)	Injuries and Illnesses				Injuries			
		Total cases	Lost workday cases		Cases without lost work-days	Total cases	Lost workday cases		Cases without lost work-days
			Total ³	With days away from work ⁴			Total ³	With days away from work ⁴	
Private Industry⁵	2,269.8	6.8	3.1	1.7	3.7	6.2	2.9	1.6	3.4
Agriculture, forestry, and fishing ⁵	24.8	7.5	2.7	1.8	4.7	7.3	2.7	1.8	4.6
Mining ⁶	5.2	5.2	3.5	2.6	1.6	5.0	3.3	2.4	1.6
Construction	141.4	9.1	4.5	3.6	4.6	9.0	4.4	3.6	4.6
Manufacturing	400.1	11.0	5.2	2.1	5.7	8.9	4.3	1.8	4.7
Transportation and public utilities ⁶	173.1	6.6	4.0	2.8	2.6	6.3	3.9	2.8	2.4
Wholesale and retail trade	646.9	6.2	2.7	1.6	3.6	6.1	2.6	1.6	3.5
Finance, insurance, and real estate	--	--	--	--	--	--	--	--	--
Services	718.2	5.1	2.0	1.1	3.1	4.8	1.9	1.1	2.9

¹ Incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000 where

N = number of injuries and illnesses

EH = total hours worked by all employees during the calendar year

200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

² Employment is expressed as an annual average and is derived primarily from the BLS-State Covered Employment and Wages program.

³ Total lost workday cases involve days away from work, or days of restricted work activity, or both.

⁴ Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

⁵ Excludes farms with fewer than 11 employees.

⁶ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employers in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor; and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.

NOTE: Because of rounding, components may not add to totals.

-- Indicates data not available.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating State agencies.

Table 2. Incidence rates¹ of nonfatal occupational injuries and illnesses by industry and selected case types, 2000

Missouri

Industry ²	SIC code ³	2000 Annual average employment ⁴ (000's)	Injuries and Illnesses				Injuries			
			Total cases	Lost workday cases		Cases without lost work days	Total cases	Lost workday cases		Cases without lost work days
				Total ⁵	With days away from work ⁶			Total ⁵	With days away from work ⁶	
Private Industry⁷		2,269.8	6.8	3.1	1.7	3.7	6.2	2.9	1.6	3.4
Manufacturing		400.1	11.0	5.2	2.1	5.7	8.9	4.3	1.8	4.7
Durable goods		--	12.1	5.6	2.5	6.5	9.8	4.5	2.1	5.3
Lumber and wood products	24	13.8	12.6	6.4	4.4	6.2	12.2	6.0	4.1	6.2
Furniture and fixtures	25	14.4	11.7	6.4	2.9	5.4	9.8	5.3	2.6	4.5
Household furniture	251	7.8	13.7	6.1	3.5	7.6	11.6	5.1	2.9	6.5
Stone, clay, and glass products	32	11.2	15.3	6.9	4.9	8.4	14.9	6.6	4.7	8.2
Primary metal industries	33	13.4	14.9	7.7	2.4	7.3	13.2	6.7	1.8	6.5
Fabricated structural metal products	344	11.7	6.2	2.1	1.4	4.1	5.4	1.8	1.2	3.6
Industrial machinery and equipment	35	40.7	10.0	3.6	1.3	6.4	9.2	3.2	1.1	6.0
Metalworking machinery	354	7.7	13.5	4.2	1.7	9.3	12.6	3.7	1.4	8.9
Refrigeration and service machinery	358	11.0	11.2	5.1	1.1	6.1	10.0	4.3	0.9	5.7
Refrigeration and heating equipment	3585	8.4	12.0	5.5	0.9	6.5	10.7	4.7	0.7	6.1
Industrial machinery, n.e.c.	359	5.1	14.3	4.6	3.0	9.7	13.8	4.4	2.9	9.4
Electronic and other electric equipment	36	32.0	7.2	3.5	1.3	3.7	5.6	2.6	1.0	3.0
Electrical industrial apparatus	362	7.4	8.3	3.7	1.0	4.6	6.3	2.7	0.7	3.6
Motors and generators	3621	6.8	8.5	3.6	1.1	4.9	6.4	2.6	0.8	3.8
Household appliances	363	2.9	10.9	4.0	2.0	6.9	7.8	2.4	1.0	5.4
Electric lighting and wiring equipment	364	5.1	10.6	6.3	1.8	4.2	8.9	5.1	1.6	3.8
Miscellaneous electrical equipment and supplies	369	4.2	5.8	2.4	1.3	3.3	4.2	1.7	0.9	2.4
Transportation equipment	37	55.8	18.9	8.6	3.8	10.2	12.8	6.1	2.9	6.8
Motor vehicles and equipment	371	32.0	25.9	11.9	5.0	14.0	16.4	7.7	3.5	8.7
Motor vehicles and car bodies	3711	17.0	40.9	18.2	7.4	22.7	23.6	10.6	4.6	12.9
Instruments and related products	38	7.4	5.8	2.9	0.8	2.9	4.6	2.5	0.6	2.1
Miscellaneous manufacturing industries	39	8.1	8.1	4.3	1.4	3.8	7.3	3.6	1.3	3.7
Nondurable goods		--	9.4	4.7	1.6	4.6	7.7	3.9	1.4	3.8
Food and kindred products	20	50.5	13.9	7.5	1.7	6.3	10.7	5.9	1.5	4.8
Poultry slaughtering and	2015	10.8	24.6	12.4	0.4	12.2	15.9	7.5	0.3	8.4
Dairy products	202	5.5	7.1	4.5	1.8	2.6	6.8	4.3	1.8	2.5
Bakery products	205	4.3	12.4	7.6	2.6	4.9	10.8	6.7	2.3	4.1
Bread, cake, and related products	2051	3.7	12.6	7.8	2.6	4.8	10.9	7.0	2.4	3.9
Men's and boys' furnishings	232	4.0	9.2	3.8	2.9	5.4	5.6	2.0	1.3	3.6
Men's and boys' trousers and slacks	2325	1.5	5.1	1.7	0.5	3.5	1.7	0.8	0.2	0.9
Paper and allied products	26	13.6	6.8	3.7	1.2	3.1	6.7	3.6	1.2	3.1
Printing and publishing	27	40.3	5.0	2.6	1.3	2.5	4.5	2.4	1.2	2.1
Newspapers	271	9.5	3.8	1.7	0.9	2.0	3.3	1.7	0.9	1.6
Commercial printing	275	13.3	6.6	2.8	1.6	3.8	6.2	2.6	1.5	3.6
Chemicals and allied products	28	25.0	5.8	2.6	1.3	3.2	5.2	2.4	1.2	2.9
Drugs	283	7.1	5.4	2.9	1.2	2.5	4.6	2.3	1.0	2.3
Rubber and miscellaneous plastics	30	20.6	8.9	4.1	2.1	4.8	7.8	3.3	1.7	4.4
Leather and leather products	31	3.4	17.3	5.9	1.7	11.5	11.5	3.9	1.6	7.6

¹ Incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as: (N/EH) x 200,000 where

N = number of injuries and illnesses
 EH = total hours worked by all employees during the calendar year
 200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

⁶ Days-away-from-work cases include those which result in days away from work with or without restricted work activity.

⁷ Excludes farms with fewer than 11 employees.

NOTE: Because of rounding, components may not add to totals.
 n.e.c. = not elsewhere classified.
 -- Indicates data not available.

² Totals include data for industries not shown separately.

³ Standard Industrial Classification Manual, 1987 Edition.

⁴ Employment is expressed as an annual average and is derived primarily from the BLS-State Covered Employment and Wages program.

⁵ Total lost workday cases involve days away from work, or days of restricted work activity, or both.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating State agencies.

Table 3. Number of nonfatal occupational injuries and illnesses involving days away from work¹ by selected worker and case characteristics and major industry division, Missouri, private industry, 1996-2000

Characteristic	Private industry ^{2,3,4}	Manufacturing				
	2000	1996	1997	1998	1999	2000
Total:	33,924	10,855	10,148	9,332	10,359	8,356
Sex:						
Men	22,489	7,760	7,659	7,215	7,726	5,973
Women	11,304	3,012	2,447	2,112	2,630	2,343
Occupation:						
Managerial and professional	1,212	102	143	137	76	60
Technical, sales, and administrative support	5,780	428	455	490	537	355
Service	4,629	122	157	120	148	117
Farming, forestry, and fishing	499	--	--	--	13	23
Precision production, craft, and repair	7,258	1,711	1,357	1,433	1,765	2,106
Operators, fabricators, and laborers	14,494	8,377	7,926	7,008	7,809	5,651

¹ Days away from work include those which result in days away from work with or without restricted work activity.

² Excludes farms with fewer than 11 employees.

³ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employees in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor; and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.

⁴ In 1996, air courier operations previously classified in Industry Groups 421, 422, 423, 452, 473, and 478 were reclassified to Industry Group 451. As a result, the 1996 and later estimates for these SIC's and Major Industry Groups 42, 45, and 47 are not comparable to those for prior years. In addition, the 1996 and 1997 estimates for transportation and public utilities may have more variability than those for prior years.

NOTE: Because of rounding and data exclusion of nonclassifiable responses, data may not sum to the totals. Dashes indicate data that do not meet publication guidelines. The scientifically selected probability sample used in each year was one of many possible samples, each of which could have produced different estimates. A measure of sampling variability for each estimate is available upon request.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

Table 4. Incidence rates¹ of nonfatal occupational injuries and illnesses involving days away from work² by "Top Five" worker and case characteristics and Manufacturing industry division, Missouri, private industry, 1996-2000

Characteristic	Private industry ^{3,4,5}	Manufacturing				
	2000	1996	1997	1998	1999	2000
Total:	174.4	263.6	243.2	223.3	257.4	212.7
Nature of injury, illness:						
Sprains, strains	76.2	98.8	96.1	82.4	104.7	75.4
All other	25.9	36.5	40.7	41.7	48.2	38.9
Bruises, contusions	12.9	24.0	21.0	23.0	17.9	18.9
Soreness, Pain	14.5	21.2	11.0	8.9	12.4	18.3
Cuts, lacerations, punctures	14.7	27.2	23.7	23.1	24.7	17.1
Part of body affected:						
Trunk	62.5	94.0	81.7	70.5	88.3	73.6
Upper extremities	41.0	88.5	87.1	81.0	90.2	70.2
Back	40.8	55.3	48.1	35.5	47.5	41.4
Lower extremities	37.1	42.9	40.5	36.0	40.7	36.4
Finger	13.5	32.6	28.9	36.5	31.7	24.0
Source of injury, illness:						
Worker motion or position	32.7	52.3	57.8	44.2	61.2	49.6
Parts and materials	21.2	56.2	49.2	50.2	51.8	39.6
All other	23.0	22.7	20.6	22.2	25.7	25.6
Machinery	12.2	30.8	25.4	30.0	31.0	24.3
Containers	25.8	37.9	27.4	23.7	28.6	23.5
Event or exposure:						
Contact with object, equipment	43.7	88.4	74.8	81.1	75.9	62.6
Overexertion	48.2	67.2	61.8	56.4	75.0	55.0
Overexertion in lifting	30.6	40.5	39.9	28.2	38.2	30.1
Repetitive motion	10.2	27.4	30.5	23.1	32.7	27.7
Struck by object	19.6	35.6	30.8	34.2	29.9	22.3

¹ Incidence rates represent the number of injuries and illnesses per 10,000 full-time workers and were calculated as: (N / EH) X 20,000,000 where,

N = number of injuries and illnesses,
 EH = total hours worked by all employees during the calendar year,
 20,000,000 = base for 10,000 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

² Days away from work include those which result in days away from work with or without restricted work activity.

³ Excludes farms with fewer than 11 employees.

⁴ Data conforming to OSHA definitions for mining operators in coal, metal, and nonmetal mining and for employees in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor; and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.

⁵ In 1996, air courier operations previously classified in Industry Groups 421, 422, 423, 452, 473, and 478 were reclassified to Industry Group 451. As a result, the 1996 and later estimates for these SIC's and Major Industry Groups 42, 45, and 47 are not comparable to those for prior years. In addition, the 1996 and 1997 estimates for transportation and public utilities may have more variability than those for prior years.

NOTE: Dashes indicate data that do not meet publication guidelines or data for incidence rates less than 1.0 per 10,000 full-time workers. The scientifically selected probability sample used in each year was one of many possible samples, each of which could have produced different estimates. A measure of sampling variability for each estimate is available upon request.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor

Table 5. Nonfatal occupational illness incidence rates by industry and category of illness, 2000

Missouri

Industry ¹	SIC code ²	Incidence rates per 10,000 full-time workers ³							
		Total cases	Skin diseases or disorders	Dust diseases of the lungs	Respiratory conditions due to toxic agents	Poisoning	Disorders due to physical agents	Disorders associated with repeated trauma	All other occupational illnesses
Private Industry⁴		57.0	5.5	0.1	1.2	1.0	2.1	40.4	6.7
Manufacturing		203.1	14.9	0.5	1.6	4.0	8.9	161.8	11.3
Durable goods		230.5	13.0	0.5	1.9	6.9	14.5	181.0	12.8
Lumber and wood products	24	43.4	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	43.4	(⁵)
Furniture and fixtures	25	192.5	4.6	1.5	3.1	(⁵)	2.3	136.7	44.3
Stone, clay, and glass products	32	47.3	1.9	(⁵)	3.7	(⁵)	9.3	18.5	13.9
Primary metal industries	33	172.3	2.9	(⁵)	5.9	(⁵)	28.6	129.0	5.9
Industrial machinery and equipment	35	79.7	9.6	0.7	1.2	(⁵)	1.0	66.3	0.7
Electronic and other electric equipment	36	157.0	7.8	(⁵)	(⁵)	3.4	0.6	139.2	5.9
Transportation equipment	37	601.7	34.0	(⁵)	2.4	26.1	41.9	467.1	30.3
Instruments and related products	38	115.8	20.3	(⁵)	(⁵)	(⁵)	(⁵)	79.6	15.9
Miscellaneous manufacturing industries	39	85.8	(⁵)	(⁵)	(⁵)	2.6	(⁵)	81.9	(⁵)
Nondurable goods		165.0	17.7	0.4	1.2	(⁵)	1.2	135.2	9.2
Food and kindred products	20	314.0	28.1	0.4	2.7	(⁵)	2.5	271.9	8.5
Paper and allied products	26	4.0	(⁵)	(⁵)	(⁵)	(⁵)	(⁵)	4.0	(⁵)
Printing and publishing	27	55.3	4.1	(⁵)	(⁵)	(⁵)	1.1	37.4	12.8
Chemicals and allied products	28	59.2	15.6	2.1	2.1	(⁵)	(⁵)	33.7	6.2
Rubber and miscellaneous plastics products	30	112.9	12.8	(⁵)	(⁵)	(⁵)	(⁵)	98.2	2.0
Leather and leather products	31	584.8	53.8	(⁵)	(⁵)	(⁵)	6.7	470.6	53.8

¹ Totals include data for industries not shown separately.

² *Standard Industrial Classification Manual*, 1987 Edition.

³ Incidence rates represent the number of illnesses per 10,000 full-time workers and were calculated as: (N/EH) x 20,000,000 where

N = number of illnesses
 EH = total hours worked by all employees during the calendar year
 20,000,000 = base for 10,000 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

⁴ Excludes farms with fewer than 11 employees.

⁵ Incidence rate less than 0.05.

NOTE: Because of rounding, components may not add to totals.

-- Indicates data not available.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating State agencies.